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THE IMPLICATIONS FOR FOREIGN OIL PRICES OF CHANGING WORLD OIL BALANCES AND OPEC PRICE/PRODUCTION POLICIES

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THE IMPLICATIONS FOR FOREIGN OIL PRICES OF CHANGING WORLD OIL BALANCES AND OPEC PRICE/PRODUCTION POLICIES

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THE IMPLICATIONS FOR FOREIGN OIL PRICES OF CHANGING WORLD OIL BALANCES AND OPEC PRICE/PRODUCTION POLICIES

Introduction

1. This Report for the Province of Alberta is in response to the first two questions set out in the Minister of Mines and Minerals letter of April 10, 1974:

#1 Future course of world oil prices - short and medium-term.

#2 Future Arab oil policy re embargoes.

Future OPEC policies re production levels.

As is evident from the questions themselves, foreign oil prices will be influenced not only by world supply/demand balances, but increasingly by the policies of major oil-exporting countries with respect to expansion of capacity and determination of production levels. We discuss foreign prices and OPEC production policies -- and the interrelation between them -- in the main text of this Report. A separate Note attached considers the question of possible future oil embargoes.

2. In the first section of the Report, we consider trends in world oil balances. The second section deals with production policies of the major oil-exporting countries. In a final section, we sum up the implications of these factors for foreign oil prices, both in the short and medium-term.

The Current Situation

3. World oil balances have turned around significantly in recent months, and crude oil prices at the margin have been weakening accordingly. When Arab production cutbacks led to acute crude oil shortages last winter, competition by companies and countries for a relatively small volume of available crude on the market led to an explosive run-up of prices (e.g., upwards of $17 per barrel for Iranian Government crude and correspondingly higher prices for closer-in Mediterranean and African supplies).

Surplus Production

4. Since then, world crude oil production has recovered and is now slightly above a year ago -- although still 1 million barrels daily below September, 1973, the peak pre-crisis month (see table following). The decisive factor in world oil markets, however, is the widespread decline in consumption. On balance, a modest surplus has emerged. Currently, production appears to be running ahead of actual consumption by perhaps some 2 1/2 million barrels per day, equivalent to around 5 per cent of current Free World requirements.

5. There are two aspects to the foreign crude oil surplus that looks to be in prospect. First, there is the volume of current production in excess of current consumption. That surplus is being absorbed by the expanded flow of oil in distribution channels and the build-up of stocks in storage, including floating storage as tankers are slowed down and even idled fully loaded at discharge ports. This process could not be of long duration; and as it works itself out, the effect would then be a commensurate decline in demand for current production. This is not an untypical cyclical response of production, being first inflated in the course of a build-up in stocks and then subsequently depressed as inventory demand abates, but in this case very much exaggerated by the crisis interruption of supplies and the post-crisis response.

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WORLD-WIDE CRUDE PRODUCTION
JUNE 1974 AND YEAR EARLIER

(Thousands of Barrels Daily)

	June		September
	1974	1973	1973
World Production[a]	46,743[c]	46,560[c]	47,829
Middle East	22,346	20,631	22,977
Saudi Arabia[b]	8,888	7,513	8,574
Iran	6,103	5,835	5,793
Kuwait[b]	2,885	2,830	3,520
Iraq	1,756	2,000	2,167
Other	2,714	2,453	2,923
Africa[d]	5,758[c]	5,974[c]	6,132
Nigeria	2,336	2,004	2,100
Libya	1,775	2,289	2,286
Algeria	1,000	1,100	1,100
Venezuela	2,961	3,417	3,387
Indonesia	1,530[c]	1,256[c]	1,338

a Excludes Communist countries; excludes NGL's; includes countries not shown separately.
b Includes share of Neutral Zone.
c May production.
d Includes countries not shown separately.

6. So far as future prices are concerned, the more significant aspect of surplus will be the relationship between the respective trends in oil consumption and in productive capacity, and the subsequent production decisions of key producing countries. We return to these questions after looking at current trends in prices and costs.

Prices at the Margin

7. To a considerable extent, the current weakness of crude prices at the margin reflects the circumstances of precisely those buyers who had been most aggressive in bidding up crude prices during the preceding period of shortage. Now current supplies on hand are more ample and continuing commitments to lift are a further drag.

8. Thus, the crudes that had formerly been bid up highest -- i.e., government production available to arm's-length buyers -- are now weakening in reaction. Libyan crude has come down progressively in price; and Algeria has had to lower its third-quarter sights from $14 to $13, with recent reports of prices below $12. Kuwait's huge 1 1/4-million-barrels-per-day auction at the end of June was extended another two weeks in an attempt to elicit higher prices for larger volume than had been forthcoming initially and then 700,000 barrels daily of this volume was finally put back on BP/Gulf, the concession-holders (of which more later). Iraq was forced to reduce its asking price in the Mediterranean from $12.20 to $11.50 in the face of a sharp reduction in sales.

Costs at the Center

9. But while crude prices at the margins have been coming down in response to the shift in world crude balances, crude costs at the center -- for the mainstream of world oil flows -- have been going up. It is not just that posted or tax-reference prices have been boosted sharply. Participation was introduced as from January, 1973, with 25-per-cent ownership typically conveyed to host governments (additional ownership being agreed, beginning with an added 5 per cent in 1978 and ending with 51-per-cent participation in 1982). But 60-per-cent participation has now already been conceded in the Middle East, retroactive to January, 1974. And Saudi Arabia has announced its intention to take over Aramco operations completely, which probably means that the concession system as it has been known will have largely disappeared from major established producing areas by 1975 (of which more following). In course, buy-back prices for government crude have also risen sharply.

10. This brief transitional period of participation bred inherently unstable cost/price relationships in the world oil trade. First off, there was the wide spread that developed between the tax-paid cost of concession-holding companies' equity crude or even their average offtake costs of equity plus buy-back crude and the arm's-length price at which government crude could be gotten.

11. Increased integrated margins were clearly evidenced in major company earnings. Non-operating earnings aside, the bulk of the reported increases in major oil company profits last year was owing to improvement in realized prices, with expansion of volume being a relatively minor factor. This was even more the case in the first half of 1974, including large inventory profits. The dramatic improvement in earnings despite higher crude costs (particularly as imputed by OPEC) was an obvious springboard to demands for still higher government take. The process, ratchet-like, points toward still higher average offtake costs for the companies and, in turn, further upward pressure on prices.

12. At its June meeting in Quito, OPEC considered various alternative proposals to squeeze profit margins on production. One involved an increase in the income tax rate from 55 to 87 per cent. Significantly, however, the tax rate would continue to be calculated on the basis of posted prices rather than actual realizations. Thus, the effect of the tax would not be to siphon off the producing companies' trading profits, but instead to increase the companies' average crude offtake costs from $9.35 to $10.64 per barrel on Saudi Arabian light crude (see table following). If this had been or were to be the policy pursued by OPEC, the increase in costs at the center would inevitably be reflected in a further increase in foreign crude prices. Whether all of the increase in costs could be recovered in the market place or whether some part would come out of company margins would depend on circumstances in the market. However, OPEC's own ability to impose such higher taxes depends upon reasonably effective production constraints and thus market conditions are likely to be conducive to the passing on of such costs by the producing companies and hence maintenance of per-barrel profit margins.

AVERAGE OFFTAKE COST OF SAUDI ARABIAN LIGHT (34°) "MARKER" CRUDE UNDER ALTERNATIVE ARRANGEMENTS

(Dollars Per Barrel)

	First Half 1974 Terms[a]	With 87% Tax-Rate[b]	Sales by Government at 94.8% of Posting[c]
Producing Cost	$ .10	$ .10	
Tax/Royalty	7.01	10.24	
Tax-Paid Cost of Equity Crude (40%)	7.11	10.34	
Buy-back Price for Participation Crude (60%)	10.83	10.83	
Average Offtake Cost	$ 9.35	$10.64	$11.05

a Current terms are taken as 12.5% expensed royalty and 55% income tax rate for 40% equity crude; 93% of posted price for 60% participation crude bought back from Government.

b As in (a) but with income tax rate increased to 87% (still applied to taxable income based on postings), which was one of the recommendations of OPEC's Economic Commission put forth at the Quito meeting in June, 1974.

c As per the BP/Gulf arrangement with Kuwait for additional third-quarter 1974 liftings.

13. As it turned out, the Quito meeting produced a stand-off. The considerable pressure from OPEC's Economic Commission and most member countries for higher prices and/or an increase to the 87-percent tax rate was countered by Saudi Arabia, which had come out publicly for lower prices (of which more later). The result was an interim agreement to freeze postings (tax reference prices) until September, when OPEC will again review the matter. Meanwhile, OPEC agreed on an increase in government take through an increase of 2-percentage points in royalty rates (or other equivalent device).

14. Saudi Arabia announced that it would not apply the higher royalty.* However, Indonesia announced that the posted price freeze did not apply to its case; the Indonesian official selling price was raised by some 90 cents per barrel as of July 1. And Venezuela obviously did not consider herself bound by either price or government-take decisions; tax-reference values were raised (via the "variable" component) as of July, so as to result in 31 to 35 cents per barrel tax-cost increases for crudes over 25°; and an additional boost in the country's 58-per-cent effective income tax rate is projected.

15. While the Quito meeting of OPEC was marked by irresolution, this may not be the case next time around. The further evidence of company profitability provided by second-quarter results will probably spur even stronger pressure for increased government take.

16. The inherent concern of integrated oil companies to ensure their crude oil availability to the maximum extent possible has also worked to push up costs under participation. After all, the bulk of their investment (even though not their profits, historically) is downstream, and an assured flow of crude is basic to their operations. The companies, in their negotiations with producing governments and to the extent that there is room for negotiation, would be naturally concerned to get offtake rights to the maximum volume of crude at the minimum possible average cost. But in many circumstances, if not always, access to crude would if necessary take precedence over price. That is to say, it could be less costly in terms of integrated operations to concede a somewhat higher buy-back price than to be deprived of essential crude volumes.

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* Among other countries that are likely to do so, it is unclear whether the increased royalty (e.g., 11 cents per barrel on a light Middle East crude) will affect only the cost of equity crude, or will carry over as well to the buy-back price which governments expect to receive for their oil.

17. Under participation, any increase in buy-back price increases a company's average lifting cost. But the effect on average lifting cost is diluted by the volume and relatively low tax-paid cost of equity crude. Meanwhile, buy-back prices tend to set a floor under the price at which governments are prepared to sell to third parties. On this basis, an increase in buy-back prices need not adversely affect the integrated companies' competitive position in world markets.

18. The cost of crude at the center -- that is, for the mainstream of supplies that are offtaken by major integrated companies -- has thus been in a rising trend precisely when the prices of crude at the margin have been declining. An immediate question is whether the crude price weakness that reflects current market conditions will press prices persistently lower, or whether price declines at the margin will quickly bottom out as they begin to approach crude costs at the center. How successful OPEC will be in containing potential surpluses will in the first instance determine the intensity of pressures at the margin. But there is as yet no clear indication that costs at the center -- and hence the floor under prices for marginal supplies -- can be reduced under the present participation regime.

Future Oil Balances

19. Looking ahead, what will be critical to world oil balances are emerging trends in oil consumption and in productive capacity.

Oil Consumption

20. On the demand side, it is still too early to project with confidence how long and how much lagging oil consumption will continue to be retarded. Among the uncertainties, the extent to which consumption is still reflecting

the trauma of physical shortages, a reaction to the explosive increase in prices, and/or the high level of prices? The first two can be expected to be of declining importance over time. The price impact on oil consumption, however, could well carry forward and even grow stronger as household and especially industrial consumers have time to adapt. But there is relatively little in the way of past experience that can be drawn upon to assess with any precision the long-run response to higher prices.

21. National policy in oil-importing countries is hardly playing any role with respect to oil demand at present. Restrictions were generally abandoned as soon as the end of the supply crisis was in sight. But the cumulating foreign exchange cost of oil imports will be increasingly felt. Not only developing countries, but many industrialized countries as well may be driven to various devices -- whether controls over the volume of oil imports, or foreign exchange allocations, or regulations governing oil consumption.

22. On balance, it is likely that world-wide oil imports will turn up again sooner or later, but growth should be relatively slow over the years immediately ahead. And if the rate of growth looks to accelerate appreciably, oil-importing governments are likely to be impelled to dampen the uptrend.

23. If there were an early return to pre-crisis rates of growth in oil consumption, the current surplus could quickly disappear and crude prices at the margin would firm and then probably move up once again. But if growth in demand is restrained, as is more likely, production will have to be cut back to eliminate the current surplus. If growth in demand continues at slow rates, the problems of containment of production will mount. Over the medium-term, notably by the latter 1970's, new major sources of non-OPEC oil will be coming onstream (e.g., North Sea and North Slope).

Surplus Capacity

24. The potential surplus overhanging crude markets is larger than indicated by the current excess of production over consumption. It is estimated that even at today's excessive rate of production there is 4.6 million barrels daily of shut-in productive capacity world-wide, or about 10 per cent more than is currently being produced (see table following). The bulk of this shut-in capacity is in the Middle East (3.3 million barrels per day), but with substantial volumes also in Africa (1.4 million, largely in Libya).

25. Meanwhile, expansion of productive capacity is continuing apace. The oil industry has strong incentives to push exploration, especially outside the Middle East. The Middle East is where current large established reserves are. But companies' access to those reserves became increasingly uncertain as concessionary rights were being torn up; and even world access to established reserves is contingent on producing governments' production decisions! At the same time, high crude prices tend both to extend the "margin" of exploration and conduce to the development of productive capacity that might otherwise have been uneconomical.

26. Countries where new oil is found are likely to be as eager to develop those reserves as the industry. Even within OPEC, there is little indication as yet of significant retardation in the expansion of potential capacity. The member countries that have been holding the line on current production tend to be those with limited reserves -- Venezuela, Algeria, Libya, and also Kuwait; all are naturally eager to get on with whatever exploration looks to be a practicable possibility. Iran, Iraq, Persian Gulf sheikdoms where production is just beginning, Nigeria, and Indonesia are all actively concerned both to increase their reserves and their productive capacities. Indicated additions to capacity in these countries aggregate some 5 1/2 million barrels daily.

WORLD-WIDE CRUDE PRODUCTION AND PRODUCTIVE CAPACITY, JUNE 1974, AND FUTURE ADDITIONS TO CAPACITY

(Thousands of Barrels Daily)

	June 1974			
	Production	Estimated Productive Capacity	Estimated Shut-in Capacity	Future Additions to Capacity (Date)
World[a]	46,743[c]	51,400	4,657	
Middle East	22,346	25,650	3,304	
Saudi Arabia[b]	8,888	10,500	1,612	+1,500 to 12,000 (1976)
Iran	6,103	6,100	...	+1,025 to 7,250 (1976)
Kuwait[b]	2,885	3,550	665	
Iraq	1,756	2,300	544	+1,200 to 3,500 (1975)
Other	2,714	3,000	286	+2,025 to 5,100 (1980)
Africa[d]	5,758[c]	7,200	1,442	
Nigeria	2,336	2,340	...	+ 700 to 3,000 (1978-80)
Libya	1,775	3,000	1,225	
Algeria	1,000[c]	1,200	200	
Venezuela	2,961	3,400	439	
Indonesia	1,530[c]	1,530	...	+ 580 to 2,000 (1978)
Addendum:				
North Sea				+1,850 (1977); +3,700/+4,300 (1980)
North Slope				+1,200 (1977-78); +2,000 (1980)

a Excludes Communist countries; excludes NGL's; includes countries not shown separately.
b Includes share of Neutral Zone.
c April production.
d Includes countries not shown separately.

27. Saudi Arabia stands apart by virtue of its huge resource potential. How far and how fast Saudi Arabia will go to expand productive capacity is a big question mark, probably as much for the government as for the outside world. But so far at least, it would seem that expansion toward capacity of 12 million barrels per day is going ahead as scheduled.

28. It would thus appear that the expansion of productive capacity might well lead to progressively larger potential surpluses over world crude oil requirements during the years immediately ahead. By the latter 1970's, incoming production from the North Slope and North Sea totaling an estimated 3 million barrels daily will provide a further fillip to the crude supply situation. By the early 1980's, these two areas might add a further 2 1/2 to 3 1/2 million barrels per day to capacity.

29. All this is far from inevitable, of course. As noted, if world oil demand were to turn up again, the market could become tight very quickly. Anything approaching even a five-per-cent-per-annum growth rate would eat rapidly into extant and prospective capacity. As suggested, however, if final consumer demand should not continue to be dampened significantly by high prices, governments in most oil-importing countries would probably have to adopt some form of restrictions as a matter of urgent policy, considering the cumulative payments problems that they will be facing.

30. The outlook, then, is for continued downward pressure on crude prices at the margin. Sharply declining tanker rates would put further pressure on the prices that government oil might command from eastern Mediterranean and African sources. And the margin above average offtake cost (weighting -- so long as present arrangements last -- equity with buy-back oil) that company sellers could expect would be correspondingly affected. But crude costs at the center would still constitute a firm floor under the competitive erosion of crude prices.

31. Emerging surplus productive capacity need not have the same sort of competitive effect on the overall level of world oil prices as in the Sixties. Producing governments do not have the incentive or the compulsion to thrust their incremental barrels upon the markets. When per-barrel government take worked out to less than $1 in the late Sixties, revenue needs had necessarily to be translated into ever larger volumes. Now, with government take at $7 plus per barrel, the urgency for volume is less compelling than their vested interest in price. So long as this holds, producing companies will have a firm cost floor under their crude supplies, with even higher costs for any incremental volumes. How future crude prices work out will thus largely depend, as noted at the outset, on the decisions taken by producing governments as to disposition of their potential production.

OPEC Price/Production Policies

The Price Issue

32. Alone within OPEC, the Saudi Arabs have come out for lower crude oil prices. The reason they give is that the level to which prices have now been boosted seriously threatens the economic and financial viability of a world dependent on oil imports for its essentail energy supplies.

33. This, of course, is the case being stressed by the United States in world councils. And while recent U.S.-Saudi Arabian agreements do not deal directly with the question of oil supplies, it is generally assumed that expansion of Saudi Arabian production -- the sine qua non of lower prices -- will proceed in course.

34. Other OPEC members are not at all convinced that lower prices are that essential to economic stability; various financial arrangements are bruited about as a sufficient alternative to resolve payments problems. Absent unity of purpose among the oil-importing countries, the other oil-producing countries are not likely to be easily persuaded as to the necessity for reducing their export prices. And for at least the more radical among them, the public posture of Saudi Arabia suggests acquiescence with U.S. intentions rather than proper concern for the producing countries' common interests.

35. Saudi Arabia may also have second thoughts about the extent to which its own self-interests are really served by the giddy heights to which current oil prices have ascended. For Saudi Arabia, it means mounting financial surpluses which are more troublesome, on many counts, than productive. Close by, there is Iran, who is asserting hegemony over the "Persian" Gulf; and Iraq, the one revolutionary Arab country that borders directly on Saudi Arabia. For these countries, sharply increased oil revenues promise an independence of action that they didn't quite have before. On balance, the Saudis may well wonder whether today's high prices are altogether in their own broader interest.

36. Whether or not this is an important consideration in Saudi Arab thinking, it would not be surprising if Iran and Iraq suspected as much. Thus, the confrontation within OPEC is not simply over the appropriate level of oil prices, but looks to have discordant political overtones as well.

37. The other OPEC members also stress that the pace of world inflation is rapidly eroding the purchasing power of their recently won gains. And furthermore, that industry has pyramided a sharp increase in its profits on top of government take. In the circumstances, they argue that prices ought more properly be raised than lowered. The 2-percentage points increase in royalty rates voted at Quito was set forth as a token of what OPEC might feel impelled to do if the oil-importing industrialized countries did not effectively curb their inflation and limit oil company profits. Saudi Arabia has itself reiterated these points.

38. In May, the Saudi Oil Minister apparently officially proposed that the posted price of the Arabian "marker" crude be reduced from $11.651 to $9 per barrel.* A $9 posting -- under the present tax regime with 60-per-cent participation and buy-back at 93 per cent of posting -- would work out to an average cost of $7.23 per barrel lifted, compared with $9.35 at present. On that basis, average offtake cost then would be pretty close to the tax-paid cost of equity crude now.

39. If anything like such a reduction in postings and hence in costs for the mainstream of crude supplies were effected, world oil prices would tend to decline commensurately. But if the oil-importing countries' payments problems are unmanageable at present prices, a reduction of that magnitude would hardly suffice to resolve those problems.**

40. Thus far, Saudi Arabia has not been prepared to break with OPEC by reducing postings. However, the Saudi selling price for government crude is an internal, not an OPEC matter. Significantly, Saudi Arabia has also refrained from reducing either its buy-back or arm's-length prices.

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* Subsequently, he is reported to have talked at Quito about a $2 reduction in postings.

** Thus far the impact of the quantum increase in foreign oil prices is only beginning to be evidenced in oil-importing countries' payments accounts. But the cumulative effect will be building up rapidly. This may conduce to greater unity of purpose among importing countries and possibly also to a greater appreciation within OPEC of the real dangers to the world economy unless there is an appreciable downward adjustment in world oil prices or, perhaps more realistically, international cooperation on financing of oil costs.

41. From the Saudi standpoint, a price reduction would be pointless unless it fans out pretty much across the board. If other OPEC members' costs and prices stay up, Saudi Arabia's impact on world market prices could be minimal. In the event, a reduction in Saudi prices would merely convey the opportunity for windfall profits upon the Aramco participants and other favored buyers.

42. Alternatively, Saudi Arabia can attempt to effect lower market prices by expansion of production -- what was openly threatened in the face of an obdurate OPEC. Other OPEC members have threatened in turn to reduce their production barrel-per-barrel with Saudi Arabia's increases, as witness a recent statement by the Algerian Industry and Energy Minister* --

> Countries like Iran, Kuwait and Algeria have declared their readiness to start, as of now, to reduce their production if it proved necessary for supporting prices. The representatives of other countries such as Nigeria, Qatar, the United Arab Emirates, while declaring that they had not been given a mandate to do likewise immediately, specified that if OPEC was to take such a measure, their governments would be ready to apply it. These same countries also clearly let the Saudi representative understand that if Saudi Arabia decided to raise substantially its production to exert pressure on prices, they would not hesitate in turn to reduce their production in amounts equal to the surplus quantities offered on the market.

If this confrontation were to ensue, what might be the price consequences?

Expansion of Production versus
Containment of Surplus

43. If Saudi Arabia increases production in line with scheduled expansion of productive capacity, output could rise from somewhat over 8 1/2 million barrels daily currently to around 12 million barrels per day within

* From a declaration published on June 26, 1974.

several years. Of the 3 1/2 million barrels daily increase, how much might in any case be required to contribute to rising world oil demand could be the critical factor in the whole equation.

44. But assuming continued retardation in oil consumption, could other OPEC members contain potential surpluses of anything like that magnitude? The key decisions would probably devolve upon Libya, Kuwait, Iraq, Iran and Abu Dhabi. Libya now has an estimated 1.2 million barrels per day of unutilized capacity; Kuwait around 700,000 barrels daily. Neither country is in urgent need of current oil revenues. Libya, on the basis of past experience, might well withhold further substantial volumes.

45. A key to Kuwait's position is provided by its recent response to the auction of 1 1/4 million barrels per day of government crude. Within the National Assembly there has been considerable pressure to conserve reserves by spreading production over a more extended life and not to produce and sell at prices that are considered inadequate. Thus, Kuwait refused all price bids as too low. Instead, Kuwait got BP and Gulf to agree to take on some 700,000 barrels daily of government oil at $10.95 or close to 95 per cent of posting -- considerably above the little-better-than-$10 offered by Japanese bidders even on the second go-around, and above the $10.84 for better-quality light Arabian crude that equates with 93 per cent of posting. The remaining volume was offered at the same $10.95 price; absent buyers, unsold oil is apparently being shut in. Details apart, what emerges is the strategy of a producing country to put its production on auction with a reserved price; if third-party bids are "unsatisfactory," unsold production may hopefully be handled by shucking off a part of the volume upon operating companies at an acceptable price and in part by shutting in surplus capacity.

46. Iraq is also producing below capacity, by an estimated 550,000 barrels per day. How much further Iraq could and would cut back production to support export prices in the light of urgent revenue needs is uncertain.

That leaves Abu Dhabi and Iran as pivotal producers. As far as Iran is concerned, the urge for revenue in the past impelled Iran to seek ever higher production. Present output of over 6 million barrels daily is probably close to capacity, although various expansion projects are underway outside the Consortium area.* Iran has been most vehement in opposing Saudi Arab pressure for lower prices. At present per-barrel revenues, the Shah may well feel able to sacrifice some volume to hold the price line.

48. For some time at least, until Saudi Arabian capacity could be expanded sufficiently, and that may involve the next several years or so, it might be possible for selected OPEC countries to contain the surplus. Containment is a relative matter, of course. As noted, much would depend on the trend in demand. And the containment effort would depend in large measure on how effectively the various producing countries could agree on sharing the burden.**

49. But an exercise in containment by Iran and Iraq, with others, would have an Alice-in-Wonderland quality. That Saudi Arabia, with the largest volume of oil production and vast financial reserves, might play the role of balance wheel is one thing. That Iran and Iraq -- with relatively large populations, endless development needs, and in due course most able to absorb oil revenues internally -- should bear the burden of production cutbacks whilst Saudi Arabia expands to the limits of capacity is quite another. And to the extent that the exercise were successful, Saudi Arabia could also benefit from resulting price supports, since Saudi Arabia is as unlikely in the future as at present merely to convey lower prices to its buyers than the value of oil in world markets.

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* A previous production target of 8 1/2 million barrels daily is probably unattainable from presently known reserves.

** Or could they even contain production to such an extent that they could increase prices and thus maintain or at least approximate previously anticipated revenues even at lower levels of production?

50. Both sides have thus to assess the direct and indirect implications of any early confrontation over price.

Can Saudi Arabia realistically expect to bring prices down by anything like its proposed $2 per barrel if others are prepared to cut back production?

Can others hold prices up close to current levels for any length of time if Saudi Arabia produces all out? And at what cost to themselves in terms of total oil revenues?

51. One possibility would be a compromise with OPEC. Saudi Arabia might gain agreement on some reduction in price in return for its commitment to restrain production so as to support that agreed price, along with periodic subsequent upward adjustments. What the chances are, there is no way of knowing, particularly in view of political considerations that obfuscate the subject of oil prices. Presumably if there is a compromise within OPEC, the price reduction would be less than Saudi Arabia has been bruiting about. And the chances in September or any future date will be less, to the extent that inflation remains unchecked and oil company profits on crude dispostion steel the determination of OPEC members.

52. Saudi Arabia had been planning a large-scale sale of Government crude. There were conflicting reports as to almost every aspect of the sale:

Volumes ranging from "nearly" 1 million barrels daily up to as much as 2 million barrels per day;

The crude sold would be additional output or from the Government share of output now being bought back by Aramco;

Sales would be made at auction or negotiated;

If auctioned, there would be a floor or reserve price, as in Kuwait, or oil would be sold at whatever prices were bid, no matter how low.

If this sale were to materialize, it might make clearer the Saudi Arab intentions as to price/production policies.

53. However, Saudi Arabia has apparently cancelled its projected sale, at least for the time being. It is not clear whether the cancellation is only a temporary postponement or a permanent cancellation, with a decision being made to sell oil back to Aramco rather than conduct a public sale. The cancellation itself may well reflect the division of opinions within Saudi Arabian ruling circles. As against the position that (i) Saudi Arab production dare not leave the world short, and (ii) that increased production would conduce to some downward adjustment of unduly high prices, there is the argument that (iii) Saudi Arabian financial objectives could be satisfied, at current prices, by very substantially lower production, conserving reserves for future generations when world oil demand will be even more impelling. Both the earlier conflicting reports as to the circumstances of the sale and the subsequent cancellation suggests that Saudi Arabia has not yet decided on a clear-cut course of action.

Implications for Future Prices

54. In this final section, we consider the implications of these various developments for the future course of foreign crude prices.

55. The critical factor will clearly be the production/pricing decisions of the producing governments. The slowdown in demand and consequent emergence of surplus productive capacity could bear significantly on producing

government decisions. The greater the overhang of productive capacity, the larger the volumes that would have to be contained to support prices. And the larger the potential surpluses, the larger would be the number of producing countries and governments that would have to participate in the critical choices as between production and price.

56. At pre-crisis rates of growth in demand, major expansion of Saudi Arabian capacity looked to be essential if world oil requirements were to be met. There seemed to be no question then but that Saudi Arabia could play the role of balancing world oil supplies, and in so doing sustain a rising trend in crude prices. There was some question whether Saudi Arabia would, in fact, build up its capacity to the extent required; or would hold back so as to conserve oil reserves and not accumulate unnecessary and even troublesome financial reserves.

57. If austerity in oil consumption persists, the situation will be altogether different. The question becomes whether OPEC or any combination of member countries can and will act to contain the emerging surpluses in productive capacity in order to maintain (or even push up) crude oil prices. The answer hinges importantly on who has to contain how much surplus capacity, and at what level of prices. All of these change substantially over time.

The Near-Term

58. The trend in world crude prices is often said to depend on whether OPEC is able to contain the surplus or whether competition within OPEC will drive prices down. At least for some time yet, that particular either/or alternative looks to be beside the point. OPEC (or various of its members) will contain world oil surpluses, by any practicable standards. The question for the near-term is, at what price?

59. One alternative would be agreement on a reduction in price as proposed by Saudi Arabia. The proposed reduction on the order of $2 in average offtake costs and hence presumably in market prices can be compared with OPEC's unilateral decision only last Fall. The October 16 postings -- imposed because the industry was said to be dragging their collective feet in negotiations -- revolved around $3.12 posting for Arabian "marker" crude, yielding per-barrel take of $3. At the same time, it was officially announced the "corresponding market price" was to be $3.65. The spread between $3.65 price and $3 tax-take thus covered production costs plus company profit.

60. The subsequent bidding-up of crude prices at the margin was largely owing to Arab production cutbacks, and led in turn to OPEC's astronomical postings as from January 1 and an increase in government take from $3 to $7 per barrel. If average offtake costs are reduced to $7.23 per barrel (as implied by Saudi Arab references to a possible $9 posting), the OPEC logic of last October would imply a market price on the order of $7.75.

61. In no sense do the Saudi Arab price proposals point to a recision of OPEC's crisis-inspired price boosts. At best, they imply only a modest reduction to levels that would still far exceed OPEC's own expectations under the "more normal" circumstances of last Fall (when, it will be remembered, world crude supplies were already tight before the outbreak of hostilities and the impostion of Arab production cutbacks). The proposed rollback would still be correlated with $7-per-barrel government take in the Persian Gulf -- a level of take that was imposed under crisis conditions.

62. The proposition is often voiced, and with increasing frequency of late, that if and when the concession system is abandoned or producing countries force a takeover, competition among government sellers will inevitably force world crude prices down decisively. In these circumstances, it is argued, world oil prices would be forced down well below the level Saudi Arabia has proposed. In the near-term and probably for some time to come, this would not appear as a likely course of events.

63. As noted, Saudi Arabia has announced its intention to take over completely at least all producing operations (in a manner that perforce will differ from the Iranian model). Indeed, that decision was one of Saudi Arabia's arguments to OPEC at Quito for postponing action on posted prices until September. Takeover by Saudi Arabia would most probably be followed by other established producing countries within OPEC. At such time, posted prices would, of course, lose their meaning as tax-reference values. Prices then might possibly be posted by producing governments, being again what postings were meant to be originally -- offers to sell.

64. Thus far, producing governments have almost religiously insisted that their crude sales are at "market price." Saudi Arabia has apparently held firmly to 93 per cent of posting for its sales even while urging OPEC to agree to lower postings.

65. If precedence is any indication, it is not unlikely that Saudi Arabia and other governments taking over producing operations will insist, at least at the outset, on a "market price" equivalent to around 93 per cent of current postings (or closer to 95 per cent if the recent BP/Gulf/Kuwait arrangement is followed). This would have the obvious advantage for producing governments of starting out with a regularized price structure for the crude exports of the established producing areas.

66. On that basis, the selling price for a light Arabian crude, for example, would rise to $10.84 per barrel (or $11.05 if related to the Kuwait pattern), compared with current average offtake costs for the majors' equity and buy-back crude of $9.35.

67. Any company with downstream investment in refining/marketing would naturally seek to obtain some sort of long-term contract for crude supplies; and would reasonably expect that there would be some price consideration in return for their offtake commitments. The integrated majors

would obviously have an even more impelling concern to assure long-term crude availability, since their downstream facilities are so extensive and were built up historically on the basis of crude availability from concessions that are now being progressively extinguished.*

68. With respect to disposal of their crude, producing governments are already looking to increase over time the volumes of oil that they sell directly. They obviously expect to sell at arm's-length whenever and to the extent that prices for third-party sales are attractive. That is, when market prices are firm.

69. Producing governments would almost inevitably look to put off added volumes of crude on their operating companies and other long-term contract buyers when market prices look to be softening. There is obviously a limit to such practice. But within limits it could be as difficult for companies dependent on assured crude supplies to resist government pressures in the future if their contractual volumes are at stake, as in the past when it seemed that concessionary rights were at stake.

70. In sum, it would appear that if and when participation gives way to virtually complete government takeover -- and it appears likely quite soon -- the transition could well bring an initial increase in foreign crude

* Since the former concession-holding companies will presumably continue to handle operations for the government owners, they would naturally be paid for their services. Whether in the form of an agreed discount below market price or an agreed cash fee, either would have to be negotiated between companies and governments. For their part, the companies would expect that payment for their services (whatever the form) reflect also the fact that their contractual equity rights were being extinguished with only nominal compensation. And from the standpoint of governments, there would be an advantage in continuity of established operations. It is impossible to predict at this stage what final form such payment-for-services will take, let alone the figures that are likely to be settled on.

costs. So long as potential crude surpluses do not pit government sellers inexorably against each other and so long as oil companies with the bulk of their investments downstream have reason to be concerned for long-term assurance of crude availability, there need be nothing inevitable about downward pressure on world oil prices merely because producing countries force a takeover of what remains of the concession system.

Medium-Term

71. Containment of surplus is necessary if crude prices are to be increased, or held, or even allowed to decline (as Saudi Arabia proposes), but to a level acceptable to the producing countries. In the short run, the major producing countries are likely to be successful in effecting a reasonable measure of containment. As one looks ahead, however, it becomes less certain whether they will be able to continue to do so.

72. At what point could containment become a very serious and perhaps unmanageable problem for OPEC? When "outside" sources of oil production are built up significantly -- e.g., incoming North Slope and North Sea production, and development of capacity that is now the object of world-wide exploration. And when dampened world oil demand is proven to be reality. Under those circumstances, or even in anticipation when the consequences are sufficiently perceived, the established producing countries could find agreement on sharing the burden of production restrictions increasingly difficult. If it can't be done by one or two, or is too costly for them alone, a larger number of cooperating countries would have to be brought in if the cartel were to function effectively. Production scheduling or prorationing among its members has not been among OPEC's notable successes! *

* Saudi Arabia, along with other Middle East countries, is embarked on ambitious schemes for use of associated gas that is now being flared. Capital costs of these projects, whether for internal use as low cost fuel to support industrial enterprises or for export, will be huge. Once the gas is committed, future crude production decisions would have to take into account the effect of cutbacks on gas availability.

73. Just when the pressures on oil-exporting countries might become intense enough to lead to potential price competition is uncertain. If new major sources of outside crude come in early and austerity in oil consumption is maintained, it could be as soon as, say, 1977. If new crude sources are delayed and/or prove disappointing and growth in oil demand is accelerated, the pressures may not come until later or may even not come about at all.

74. Thus, at some time during the medium-term, OPEC could be faced with productive capacity that is far in excess of demand for OPEC oil. If this happens, the problem of containment could become acute. The question then is whether Saudi Arabia would restrain its expansion; or, if not, whether the rest of OPEC could agree on counter production restrictions; or lacking agreement, if individual countries would be prepared to cut back and bear the burden that the market imposes.

75. For importing countries, the problem is the extent to which they can restrain consumption so as to make more rather than less difficult the containment of surplus by the producing countries.

A NOTE ON
ARAB OIL EMBARGOES

1. Arab oil-exporting countries imposed embargoes on shipments to selected countries in both the 1967 and 1973 Arab-Israeli conflicts. In this Note, we review briefly the circumstances of the two embargoes and then consider the possibility of future embargoes.

Two Past Embargoes

1967

2. Soon after the Arab-Israeli June 1967 War broke out, the major Arab oil-exporting countries declared bans on exports to "aggressor" states -- the United States, Britain, and, in a somewhat ambiguous manner, West Germany. The embargo was lifted at an Arab Summit Conference in August, 1967.

3. At the time of the 1967 embargo, there was no concerted effort by Arab countries to cut back production significantly. In any event, substantial unutilized capacity was available in non-Arab exporting countries -- e.g., Iran and Venezuela -- and in the United States. As a result, the industry was able to cope with this first embargo without major difficulties. Production was stepped up in non-Arab countries to supply embargoed importing countries and Arab oil was diverted to non-embargoed destinations. World demands were thus largely met despite the embargo.

4. The Arab embargo imposed in October, 1973 in response to renewed Arab-Israeli hostilities was much more effective. This reflects both (i) the nature of the accompanying action taken by the Arabs -- an overall production cutback of a substantial magnitude -- and (ii) the circumstances at the time of the embargo -- crude tightness, with very little unutilized capacity in non-Arab countries.

5. By late October, 1973, all major Arab producing countries with the exception of Iraq* had cut back production by between 5-10 per cent and had imposed a total embargo on shipments to the United States and Holland. By November/December, output had been cut back further to about 25 per cent below the level of September, 1973. Efforts were also instituted to block indirect shipments of oil to embargoed countries via either transshipment or processing in third countries. Destinations to which shipments were cut off or cut back to the extent that they contributed to indirect deliveries included: Canada, Trinidad, Bahamas, NWI, Puerto Rico, Bahrain, Guam and Singapore. In addition, the Arab Summit Conference in late November added three other countries to the embargoed list -- South Africa, Rhodesia, and Portugal -- mainly as a gesture of gratitude to the African countries which cut off diplomatic relations with Israel.

6. As the Middle East situation improved, with U.S. endeavors playing an important role, most of the Arab producing countries lifted their embargo on shipments to the United States in March, 1974; the embargo on Holland was lifted in July. And production was increased once again in most Arab countries, except those that had been restricting production for other reasons prior to the Arab-Israeli conflict (e.g., Libya and Kuwait).

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* Iraq apparently did impose a destination embargo on the United States and Holland, but did not cut back production except where necessitated by war damage to the IPC pipeline and export terminal facilities.

7. In general, the Arab oil embargo of 1973/74 was successful in the sense that, except for minor volumes, shipments from Arab countries did not reach embargoed destinations. But the burden of production cutbacks was shared by both friend and foe alike. The volumes lost to embargoed countries were made up in part from non-Arab sources. The effect was to leave non-embargoed countries also short, owing to the overall cutback in Arab production and the limited availability of expansible production in other areas. Thus, the result was a general -- although not entirely equal -- sharing in the shortfall in world oil supplies, both amongst embargoed and non-embargoed countries. Significantly, this sharing was effected largely through company allocations, rather than intergovernmental cooperation.

Future Embargoes

8. Drawing upon the experience of the past two Arab embargoes, we would expect that two basic factors would be essential to any future embargo --

> Cutbacks in production by the countries imposing the embargo; and
>
> Lack of substantial shut-in capacity in other countries that might be called upon to make up deficiencies.

9. In the near term, the modest volume of surplus producing capacity outside the Arab bloc is not likely in itself to discourage another embargo if they were so impelled by political considerations. The more crucial question is whether the political considerations are likely to forge again the unity of purpose that is prerequisite to effective cutbacks in production.

10. The role of Saudi Arabia would be critical to the success of any future embargo. Without the full cooperation of Saudi Arabia, there could not really be an effective Arab embargo. For example, if Saudi Arabia were to go along with an embargo but also maintain production, let alone continue to expand, that in itself could be enough to ease the tightness and lead to results closer to the 1967 experience than that of 1973/74.

11. If Saudi Arabia did not fully cooperate and the other Arabs were determined, the conflict could spill over in the form of sabotage of Saudi Arab producing installations, pipelines, or loading terminals, or even threats to the monarchy itself. These possibilities would almost certainly be anticipated by Saudi Arabia and could enter into its decision as to participation in an embargo and production cutbacks.

12. The Saudi position, let alone that of the more militant Arab countries, would in turn depend upon the course of events. Without doubt, there is explosive potential enough in the Middle East. Presumably peace negotiations will have to be resumed again, with all the really basic issues remaining to be resolved. There is the issue of Israeli withdrawal -- from Sinai and the Golan Heights. There is the issue of the West Bank, further obfuscated by competing Palestinian, Jordanian, and divided Israeli interests. And Jerusalem, about which King Faisal has repeatedly expressed special concern.

13. Whether "lack of progress" toward Arab goals would be enough to trigger another boycott with Saudi Arabian concurrence is uncertain. The recent improvement in U.S. relations with Saudi Arabia (and Egypt) -- and Saudi/Egyptian interests increasingly focused on economic development -- could be a plus factor. Diplomatic restraint on both sides might be possible, in contrast to publicly announced U.S. support for Israel last year. (It will be recalled that in October, Saudi Arabia initially announced only a cutback in production; it was after President Nixon asked Congress for $2.2 billion in military assistance for Israel that the Saudis joined other Arab producers in the boycott of exports to the United States.)

14. However, there is the further very real danger that overt hostilities may be renewed between a militant and rearmed Syria and Israel, with one or the other striking first. In the event, the Arabs have clearly indicated their readiness to use their oil weapon again. The danger with all its ramifications will have been perceived by all parties: Saudi Arabia and Egypt, the United States, even Israel would not want to allow themselves to become enmeshed by Syrian (and Soviet) purposes. But the issues are so deep and the tensions so strained that war could break out again, making it difficult for Saudi Arabia to remain apart from a unified Arab embargo.

15. Looking further ahead, the development of productive capacity around the world could bear on the likelihood of future embargoes and their effectiveness. It has to be anticipated that new "outside" productive capacity will generally be brought into full utilization as quickly as possible. This means that there is unlikely to be substantial surplus capacity in non-Arab countries that could make up for any future embargo/cutback. But as discussed in the main text, this also means that the Arab countries will have to contain large and growing volumes of surplus productive capacity on a continuing basis in order to maintain prices. Thus, the Arab countries are likely to already be producing far below capacity at the start of any future embargo.* Further cutbacks in support of a future embargo could be a more burdensome undertaking than today.

16. On the other hand, the mounting financial reserves of the Arab producing countries give them much more freedom of action than they ever had in the past. Those countries with very large financial reserves may be able to live with drastically reduced output for a very considerable period of time. Financial strength varies amongst Arab producing countries. Iraq, and Algeria, with large development needs, do not and will not have the financial reserves of Saudi Arabia, Kuwait, Abu Dhabi and Libya, but the militancy of Iraq and Algeria could be a more decisive consideration than immediate oil revenues.

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* If Arab countries were producing near capacity, this would imply that they were competing for markets, shutting in production in other areas. But this is not very likely.

17. A critical question could be how long an embargo/production cutback would have to be sustained in order to be effective. The answer is uncertain, but it should be noted that the rest of the world is also likely to be better prepared to live with embargoes/cutbacks than in the past. As a result of the 1973 experience, stockpiles of oil are being increased, enabling consuming countries to hold out longer if that is necessary. Agreement has also been reached, in principle at least, on burden-sharing during emergencies, but how effective this might be in a real crunch remains to be seen.

18. In sum, the use of an oil embargo supported by a production cutback as a political weapon is always a possibility over the years ahead. Recent statements from virtually all the Arab producing countries have reaffirmed their willingness to use oil as an instrument of national policy. The mounting surplus of productive capacity and importing country stockpiling/burden-sharing could work to make a future embargo somewhat less likely; but the unstable situation in the Middle East, the presumed success of the oil weapon in 1973/74, and the huge financial reserves of producing countries all conduce nevertheless to a continuing and real threat.